CHAPTER 7

QUALITY SURVEILLANCE (QS)

A. GENERAL. This chapter provides QS guidance for bulk petroleum products; objective is to maintain the best quality fuel for the end user (aircraft, vehicle, etc.).

B. QUALITY SURVEILLANCE ((?S) PROGRAM

1. OS Publications. Publications which regulate QS procedures for bulk petroleum products/services are MIL-HDBK-200 (see reference index) and military technical manuals. MIL-HDBK-200 is developed by DFSC-Q in coordination with the Military Services. QS functions and procedures are cited in MIL-HDBK-200. DFSC-Q shall be the central source for QS guidance in the Defense Department.

2. Quality Representative (QR) Assignments

a. QRs will be assigned DFSPS (terminal and pipeline-depot operations) storing/handling Government-owned product (see volume V, appendix A57 of this manual) to manage the petroleum quality surveillance program and monitor its functions. At contractor-operated DFSPS, the QR maybe either a resident or itinerant QR.

b. To avoid duplicate effort, QRs shall perform property administration functions in conjunction with QS functions unless it can be demonstrated economically disadvantageous or administratively impractical.

3. Contractor Operated DFSPS

a. Government QRs assure that contractors comply with the contractual requirements in storing and handling Government-owned petroleum products and related services. QRs shall not enter into informal agreements with the contractor which may compromise the contract or operating agreement, nor accept voluntary services for the Government without approval of the Contracting Officer.

b. Contracts relating to receipt and storage of products procured for Government use require the contractor to provide laboratory and testing services or commercial laboratory services. If the contractor provides the lab but is not required to perform the testing services, QRs may be directed to perform the tests needed to assure the quality of Government products at. that location.

4. Reporting Product Quality Deficiencies

a. Base-level DFSPS shall notify the military technical office (see chapter 3, section F. of this volume) and the DFR of fuel quality problems promptly by phone in all cases. Military technical offices shall promptly report such problems to DFSC-Q by phone and coordinate corrective action with the base DFSP and DFSC-Q. In all cases, base-level DFSPS shall initiate investigative action and report the problem IAW the joint Product Quality Deficiency Report Program - DLAR 4155.24/AR 702-7/SECNAVINST 4855.5/AFR 74-6/MCO 4855.5F and MIL-HDBK-200; and provide copies of the report/documents to the military technical office, DFR, and DFSC-Q.

b. Military technical quality offices (chapter 3, section F., of this volume) shall serve as the military central point of documentation to assure corrective action precludes recurrence and is done at the least cost to DoD. Fuel quality deficiencies and problems are documented and reported for trend analysis to preclude recurrence and to fix systemic problems. Corrective actions ensure mission capability and readiness.

C. QUALITY SURVEILLANCE (QS) RESPONSIBILITIES

1. Joint Petroleum Office (JPO). JPOS shall maintain over-sight of matters, records, and reports pertinent to the quality of fuel.

2. Defense Fuel Supply Center. DFSC shall establish and maintain a QS program for DLA-owned product in its custody as follows:

a. At GOCO and COCO DFSPS under DFSC contracts and NATO-operated storage facilities. When QS and property administration responsibility are delegated to another agency or military unit, DFSC contracts will indicate such organization.

b. Discharging and loading of MSC-controlled tankers at foreign Government-operated storage facilities.

c. When quality surveillance has been assumed by DFSC through an ISA with the Military Services or through MOUS between the Military Services and foreign governments. NOTE: DFSC will provide

qualitative and quantitative data in response to the needs of JPOs or Military Services in fulfilling their respective area management responsibilities (slating, product rotation, inventory reporting, etc.).

d. Assess procedures used to receive and maintain the quality of DLA-owned product stored at military facilities, after prior notification to the military activity.

3. Military Services. The Military Services shall establish and maintain a QS program for DLA-owned product in their custody as follows:

a. At military-owned and military-operated fuel facilities.

b. At contractor-operated fuel facilities under U.S. military contracts.

c. At foreign government fuel facilities (excluding discharging and loading covered by DLA in paragraph C.2.b., above) under U.S. Military Service/ Government MOU or country-to-country agreement.

d. Discharging and loading of MSC-controlled tankers at U.S. Government terminals operated by foreign governments under bilateral agreements or NATO terminals operated with U.S. military personnel.

e. At commercial and U.S. Government fuel facilities operated under DFSC contracts where the petroleum QS function is delegated to a military unit by DFSC (consistent with ISA guidance in paragraph C.3 f., below). Upon request, military units will provide DFSC-Q with quality data to determine product suitability in meeting special requirements. Dormant tanks will be managed and reported IAW section F., below.

f. Interservice Support Agreement (ISA). In the interest of protecting Government-owned product at minimum cost, ISAS shall be used to obtain QS support Such agreements shall be secured whenever it is determined to be the most practical and efficient way of providing QS for DLA-owned product at contractor, foreign government, or NATO DFSPS. ISAs for QS functions shall be initiated/executed at the lowest practicable command level. DoD Directive 4000.19 and DoD 4000.19-R (see reference index) shall be used for formal guidance and detailed instructions.

D. MINIMUM SAMPLING AND TESTING REQUIREMENTS

1. MIL-HDBK-200 (see reference index) provides basic guidelines for the "where/when" samples of petroleum products are to be obtained and the type of test to be performed. It also provides the product characteristics to be determined for each type of test by product.

2. Dormant stocks will be sampled IAW the frequency specified by MIL-HDBK-200; see definition of dormant stocks in subsection F.2, below.

E. FUEL LABORATORIES

1. Military Services shall:

a. Maintain military fuel laboratories and provide associated services where practical and cost efficient.

b. Perform base-level QS (military quality control measures which requires limited base-level tests to evaluate the cleanliness of the fuel and fuel-handling systems for operational use); such efforts are not a substitute for area fuel laboratory requirements.

c. Fund the costs of base-level quality surveillance.

2. DFSC shall:

a. Maintain DFSC fuel laboratories and provide associated services where practical and cost efficient

b. When fee for service becomes effective, reimburse the Military Services for providing testing services of DLA-owned products (supplied by DFSC) at service fuel laboratories; such laboratories will perform testing services IAW procedures/criteria prescribed in MIL-HDBK-200 (see reference index) on a timely basis.

c. Fund the costs of testing DLA-owned product (supplied by DFSC) at commercial laboratories.

d. Designate laboratories for testing DLA-owned product (military or commercial locations) whichever are more practical and cost efficient (perform well and economically) for DoD.

F. STOCK ROTATION PROGRAM

1. General Policy. Bulk petroleum stock must be rotated on a first-in first-out basis. Quality, however, must be the overriding concern. Stocks showing signs of aging or deterioration must be rotated first, regardless

of time in storage.

2. Dormant Stock Policy. Rotation of DLA-owned dormant stocks (due to insufficient consumption throughput or infrequent receipts at DFSPs) is governed by the following policy:

a. Dormant stocks are defined as storage tanks which have not received fuel from an outside source for the past 6 months.

b. The foremost principle of the "dormant stock policy" is that decisions to rotate should be based on quality data. Instructions for frequency of testing and reporting of quality data are prescribed in MIL-HDBK-200 (see reference index).

c. Rotation timetable will be used for budgetary and planning purposes in forming rotation plans. The timetable provides probable shelf lives of major fuel categories and sets the maximum outyears within which dormant fuel should be scheduled for rotation:

(1) Fuel oils #l and #2 . . . . . every 2 years.

(2) Diesel fuel and gasoline . . . . . every 3 years.

(3) Jet. fuel and residuals . . . . . every 5 years.

d. Stock rotation plans will be submitted annually through JPOS (DFR-E in EUCOM) and DFRs in CONUS to DFSC-O; data will be reported on DD Form 2512, Bulk Fuel Stock Rotation Plan, RCS: DLA(A) 2505(DFSC). Quality data shall determine in which outyear the stocks are scheduled for rotation. Rotation plans will include the location of the DFSP, the dormant tank number, the product in the tank, the volume of product, the suggested FY for rotation, the degrading characteristics supporting the rotation, suggested alternatives for rotation destinations, mode of transportation, and any other data considered useful for the coordination and approval process.

e. Approved rotation plans will state the executing agency. Projected movements in the coordinated/approved rotation plan will provide the basis for near term budget/procurement planning. However, as the projected movements become imminent, the final decision to rotate the stocks will be based on quality and funding parameters at that time. Thus, the stock rotation plan and its initial administrative approval does not constitute final authority to rotate fuel. Routine fired authorizations for transportation in theaters are not to be utilized for stock rotation movements. Special and separate fund authorizations will be issued when stock rotation plans have been budgeted and finally approved. Because fuel degradation is not entirely predictable, projected movements may be accelerated or rescheduled from one year to another.

f. JPOS and CONUS DFRs will annually update and submit their plans to DFSC-O. To the greatest extent possible, the review and coordination between DFSC and the JPOs/DFRs will be conducted by correspondence or telephone in lieu of annual meetings. The annual coordination process includes a budget review which may require direct input of the planner to aid in defending budget requirements.

g. Stock rotation is an integral part of quality surveillance. DoD Components who have quality surveillance responsibility at DFSPS shall assume stock rotation functions/initiate stock rotation action for dormant stocks (see subsection F.3., below).

3. Reporting Responsibility for Dormant Stock

a. DLA. DLA shall establish and maintain a stock rotation program for DLA-owned product. DFSC will coordinate proposed stock rotation plans submitted annually by the JPOS and CONUS DFRs. The most economical or expedient rotational solution will be selected after considering relevant operational, technical, procurement, and budgetary factors. DFSC, in coordination with the JPOs/DFRs, will designate the organization responsible for executing the movement.

b. JPO. JPOs shall propose an annual stock rotation plan to DFSC-O. JPOS shall consolidate and coordinate all subarea plans input by the Military Services and overseas DFRs prior to the annual proposal. JPOS may designate component commands or DFRs the partial or complete responsibility to report dormant tanks and to initiate single terminal or subarea plans.

c. CONUS DFRs. CONUS DFRs shall propose an annual stock rotation plan to DFSC-O IAW the provisions of subsection F.2., above. DFRs will consolidate their input with the Military Services input prior to the annual proposal.

d. Overseas DFRs. Overseas DFRs shall propose an annual stock rotation plan to JPOS IAW the

provisions of subsection F.2., above.

e. Military Services. Operators at military DFSPs in CONUS and overseas will report dormant tank data IAW subsection F.2., above, to CONUS DFRs and JPOS overseas.

4. Shipping Dormant Fuel, Shipments of dormant fuel between intermediate DFSPS as part of a stock rotation plan will have the following words entered in bold print on DD Form 1348-7 (remark section) and DD Form 250-1 (block 26): DORMANT FUEL - ISSUE FIRST.

G. OFF-SPECIFICATION PRODUCT

1. Reporting Responsibility and Format. The Military Service or DLA unit having QS responsibility for DLA-owned product as defined in section C., above, will report any product that is off-specification. Notification will be made IAW instructions in MIL-HDBK-200.

2. Suspending Issues. Off-specification product will be withheld from issue pending receipt of specific disposition instructions from DFSC-Q. If disposition instructions indicate such product is to be shipped to a military consignee, the consignee will be advised prior to shipment by the shipper of full quality and use limitation details.

3. Disposition of Off-Specification Product. DFSC has final responsibility for DLA-owned product that fails one or more product intra-governmental receipt limits specified in MIL-HDBK-200. DFSC-Q shall perform quality evaluation of the "off-spec" product and provide disposition instructions to QRs/DFRs and inform DFSC-F/O/P/R (as required), and the cognizant. JPO/SAPO when its an overseas location, of action taken. Alternatives available to restore "off-spec" product to specification or acceptable intra-governmental receipt limits (at lowest cost to the Government) will be reviewed prior to disposal. Inventory management action shall be initiated by DFSC-O as required. Disposal action IAW DoD 4160.21-M (see reference index) will be taken after all other alternatives fail,

H. CONTAMINATED TANKER CARGOES (OFF-SPECIFICATION PRODUCT)

1. This section discusses "off-spec" cargoes that may require tanker diversion or reprocessing of product by industry. Due to the relatively high cost of tanker time and time required to negotiate contracts for reprocessing when required, it is necessary to expedite disposition instructions for contaminated cargoes aboard tankers.

2. In the event cargo is so contaminated as to possibly cause the tanker to be diverted to another destination or require reprocessing by industry, the unit discovering such condition shall promptly notify DFSC-O/JPO/SAPO/DFR by telephone or immediate message (if by message, DFSC-Q will be added as an info addressee) with the following data:

a. Grade (product code, F76, JP4, etc.).

b. Quantity of contaminated product.

c. Cargo number and barge or ocean tanker name.

d. Elements not within use limits, degree of contamination, and contaminating materials if known.

e. Recommended alternate use, proposed recovery measures, or disposal, etc.

3. DFSC-O shall promptly notify DFSC-Q of the circumstances and coordinate logistic action with the reporting unit; DFSC-Q shall provide disposition instructions. JPOs, DFRs, and SCPS will be furnished copies of documents/messages which are used to communicate between the reporting unit and DFSC.

I. TANK COATING AND CLEAMNG CRITERIA

1. Base-Level Terminals

a. Aviation Fuel Tanks. All aviation fuel (AVGAS/JP4/JP5/JP8) storage tanks in direct support of aircraft operations will be internally coated in entirety using an approved organic coating system. Piping and appurtenances (excluding aluminum and stainless piping) may be coated as determined to be necessary. Base-level tanks which are not in direct support of aircraft operations will be treated as intermediate tanks.

b. Marine/Ground/Heating Fuel Tanks. Newly constructed tanks should be internally coated in entirety using an approved organic coating system. Existing tanks should have the internal bottom, all vertical surfaces up to 1 meter above the bottom, and the internal roof surface coated with an approved organic coating system. Existing fuel tanks which are not entirely coated may be proposed for complete internal coating on a case-by-case basis, where economies can be

demonstrated to accrue, or if a continuing quality problem is documented.

2. Intermediate Terminals. Newly constructed fuel tanks should be internally coated in entirety using an approved organic coating system. Existing fuel storage tanks (aviation, marine, ground, and heating fuels) at intermediate terminals should have the internal bottom, all vertical surfaces up to 1 meter above the bottom, and the internal roof surface coated with an approved organic coating system. Existing fuel tanks which are not entirely coated may be proposed for complete internal coating on a case-by-case basis, where economies can be demonstrated to accrue, or if a continuing quality problem is documented.

3. Regulatory Guidance. Tanks shall be inspected and cleaned IAW MIL-STD-457 and AFM 85-16 and NAVFAC MO-230, Tank cleaning and coating projects will be prioritized IAW volume II, chapter 8 of this manual.

J. PRODUCT USE AND INTRA-GOVERNMENTAL RECEIPT LIMIT

1. Delivery Policy. Every reasonable effort shall be made to deliver product to military bases which meets procurement specification requirements. However, delivery of off-specification product meeting "intra-governmental receipt limits" shall be governed by the procedures in MIL-HDBK-200.

2. End Use Policy. Under no circumstances will fuel be issued to the end user (aircraft, vehicle, generator, etc.), unless it meets established use limits.

3. Defuels/Returns for Credit. See chapter 10, section I. of this volume.